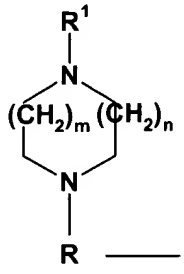
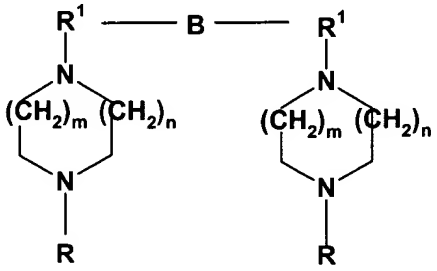
AMENDED CLAIM SET:

1. – 16. (cancelled).

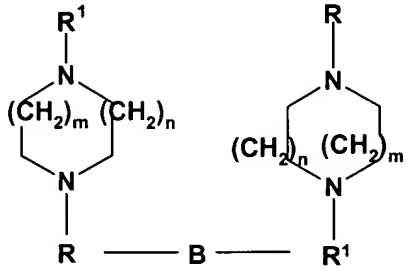
17. (new) A dimeric diazacycloalkane derivative represented by Formula II, III, or IV



(II)



(III)



(IV)

any of its enantiomers or any mixture thereof, an N oxide thereof, a pharmaceutically acceptable salt thereof, in a labelled or un-labelled form,

wherein,

n is 1; and

m is 2; and

R represents hydrogen, an alkyl group, a cycloalkyl group, a cycloalkylalkyl group, or an alkenyl group; and

R^1 represents pyridyl, pyridazinyl, quinolinyl or isoquinolinyl, which monocyclic or bicyclic heterocyclic group is optionally substituted one or more times with substituents selected from the group consisting of alkyl, alkoxy, cycloalkoxy, alkoxyalkoxy, alkoxyalkenyl, alkoxyalkynyl, alkynyl, alkenyl, alkenylthio, alkylseleno, alkoxycycloalkyl, hydroxyalkoxy, alkylthio, arylalkylthio, alkenoxy, alkynoxy, carboxylamido, arylalkylthio, arylthio, hydroxy, trifluoromethanesulfonyloxy, halogen; phenyl; phenyl substituted with alkyl, alkoxy, hydroxy, amino, or nitro; a pyrrolinyl, a piperidinyl, a tetrahydropyridinyl or a morpholinyl group; and

"-R-B-R-" in Formula II represents a single bond bridge ("-", i.e. R and B are absent), or a bridging group of the formula "R-R-" (i.e. B is absent), or a bridging group of the formula "-R-" (i.e. R is absent in only one of the two compounds making up the dimeric substance); or
"R-B-R^1" in Formula IV represents a single bond bridge ("-", i.e. R, B and R^1 are absent), or a bridging group of the formula "R-R^1-" (i.e. B is absent); or
"R-B" in Formula IV represents a single bond bridge ("-", i.e. R and B are absent, R^1 is present); or

"-R^1-B-R^1-" in Formula III represents a single bond bridge ("-", i.e. R^1 and B are absent), or a bridging group of the formula "R^1-R^1-" (i.e. B is absent), or a bridging group of the formula "-R^1-" (i.e. R^1 is absent in only one of the two compounds making up the dimeric substance); or
"R^1-B-R" in Formula IV represents a single bond bridge ("-", i.e. R, B and R^1 are absent), or a bridging group of the formula "R^1-R-" (i.e. B is absent); or
"R^1-B" in Formula IV represents a single bond bridge ("-", i.e. R^1 and B are absent, R is present); or

R and/or R^1, together with the nitrogen atom to which they are attached, represent an alkyl-onium salt, a dialkyl-onium salt, a cycloalkyl-onium salt, an alkyl-cycloalkyl-onium salt, a dicycloalkyl-onium salt, an alkyl-cycloalkylalkyl-onium salt, a cycloalkyl-cycloalkylalkyl-onium salt, or a dicycloalkylalkyl-onium salt; and

B represents a single bond bridge ("-", i.e. B is absent), or a bridging element of the formula "-ALK-", "-ALK-X-ALK-", "-X-ALK-X-", "-PHE-", "-X-PHE-X-", or "-ALK-PHE-ALK-"; wherein "ALK" represents a single bond bridge ("-", i.e. ALK is absent), or alkyl, alkenyl, or alkynyl; and "PHE" represents a phenylene (benzene-diyl) group; and X represents O, S, NH, N-alkyl or Se.

C1

18. (new) The diazacycloalkane derivative of claim 17, wherein R^1 represents
5-(1-heptynyl)-3-pyridyl;
5-(1-hexynyl)-3-pyridyl;
5-(1-pentynyl)-3-pyridyl;
5-(1-butynyl)-3-pyridyl;
5-(1-propynyl)-3-pyridyl;
5-ethylenethio-3-pyridyl;
5-(1-propylenethio)-3-pyridyl;
5-(1-butylenethio)-3-pyridyl;
5-(1-pentylenethio)-3-pyridyl;
5-ethyleneseleno-3-pyridyl;
5-(1-propyleneseleno)-3-pyridyl;
5-(1-butyleneseleno)-3-pyridyl;
5-(1-pentyleneseleno)-3-pyridyl;
5-methylseleno-3-pyridyl;
5-ethylseleno-3-pyridyl;
5-propylseleno-3-pyridyl;
5-butylseleno-3-pyridyl;
5-(N-2-pyrrolinyl)-3-pyridyl;

5-(N-3-pyrrolinyl)-3-pyridyl;
5-N-(1,4,5,6-tetrahydropyridyl)-3-pyridyl;
5-N-(1,2,5,6-tetrahydropyridyl)-3-pyridyl;
5,6-dibromo-3-pyridyl;
5-bromo-6-chloro-3-pyridyl;
6-bromo-5-chloro-3-pyridyl;
6-bromo-3-pyridyl;
5,6-dichloro-3-pyridyl;
6-fluoro-3-pyridyl;
6-iodo-3-pyridyl;
5-chloro-6-fluoro-3-pyridyl;
5-chloro-6-iodo-3-pyridyl;
5-bromo-6-fluoro-3-pyridyl;
5-bromo-6-iodo-3-pyridyl;
6-fluoro-pyridazinyl;
6-iodopyridazinyl;
5-pentyloxy-3-pyridyl;
5-(*trans*-hex-2-en-1-yl-oxy)-3-pyridyl;
5-butoxy-3-pyridyl;
5-methoxy-3-pyridyl;
5-propyloxy-3-pyridyl;
5-ethoxy-3-pyridyl;
5-propyl-1,2-epoxy-1-oxy-3-pyridyl;
5-(2-ethyl-1-butoxy)-3-pyridyl;
5-(1-methyl-1-prop-2-en-oxy)-3-pyridyl;
5-(cyclobutylmethoxy)-3-pyridyl;
5-(hex-2-en-oxy)-3-pyridyl;
5-(2-methyl-1-prop-1-en-oxy)-3-pyridyl;
5-(1-piperidinyl)-3-pyridyl;
5-(1-morpholinyl)-3-pyridyl.

19. (new) The diazacycloalkane derivative of Formula III of claim 17, wherein "-R^1-B-R^1-" represents a single bond bridge ("-", i.e. R^1 and B are absent), or a bridging group of the formula "R^1-R^1-" (i.e. B is absent), or a bridging group of the formula "-R^1-" (i.e. R^1 is absent in only one of the two compounds making up the dimeric substance); or B is a bridging group of the formula "-X-ALK-X-", wherein "ALK" represents C_{1-4}-alkyl; or B is a bridging group of the formula "-ALK-PHE-ALK-", wherein "ALK" represents C_{1-4}-alkyl, and "PHE" represents a phenylene group.

20. (new) The diazacycloalkane derivative of claim 17, said compound being
3,5-*Bis*-(N,N´-homopiperazinyl)-pyridine;
1,4-[α,α´-*Bis*-(5-Ethoxy-3-pyridyl-1-homopiperazinyl)]-dimethylbenzene;
1,4-[α,α´-*Bis*-(6-Chloro-3-pyridazinyl-1-homopiperazinyl)]-dimethylbenzene;
O,O´-*Bis*-[5-(1-homopiperazinyl)-3-pyridyl]-ethyleneglycol; or
Homopiperazinyl-5-pyrid-3-yl-5-pyrid-3-yl-homopiperazine;
any of its enantiomers or any mixture thereof, an N oxide thereof, a pharmaceutically acceptable salt thereof, in a labelled or un-labelled form.

21. (new) The compound of claim 17, which is 1-(6-bromo-5-methoxy-3-pyridyl)-homopiperazine.

22. (new) The compound of claim 17, which is 1-(6-bromo-5-methoxy-3-pyridyl)-homopiperazine or any of its enantiomers or any mixture thereof, an N oxide thereof, a pharmaceutically acceptable salt thereof, in labeled or un-labeled form.

23. (new) A pharmaceutical composition comprising a therapeutically-effective amount of a diazacycloalkane derivative of claim 17, or a pharmaceutically-acceptable addition salt thereof, together with at least one pharmaceutically-acceptable carrier or diluent.

24. (currently amended) A method of treatment, prevention or alleviation of a disease or a disorder or a condition of a living animal body, including a human, which disorder, disease or condition is responsive to the activity of nAChR modulators, comprising the step of administering to such a living animal body, including a human, in need thereof a therapeutically effective amount of the diazacycloalkane derivative of claim 17.

25. (new) The method according to claim 24, wherein a disease in the central or peripheral system, said disease being Alzheimer's disease, Parkinson's disease, memory dysfunction or attention deficit hyperactivity disorder, is treated.